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# IMPROVING TEEN-AGE NUTRITION

Assembled by

4-H Foods and Nutrition Development Committee





### Suggestions for

## IMPROVING TEENAGE NUTRITION

This booklet is meant for State extension staff members -- nutrition, 4-H and perhaps others.

Its purpose is two-fold:

- 1. to help you plan ways of improving teenage nutrition of 4-H'ers through Extension programs (but don't stop here);
- 2. to help you reach beyond present 4-H members to all teenagers.

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Figures 1 through 5 show suggested visuals for you to use. You can see or adapt all of them for presentation on flannelboard, slides, newsprint, blackboard, or posters. Color adds to their effectiveness.

### THE PROBLEM

Our problem in Extension is how we can improve teenage nutrition. We need to involve both teenage boys and girls in organized programs such as 4-H, but we also need to expand our audience to all teenagers.

Even though the teenage girl is the poorest fed member of the family, teenage boys also need to improve their diets. Since teenage boys and girls are interested in each other and doing things together, the best approach is to carry on nutrition programs with a joint approach.

We like to think we're well-fed in America. And we are, compared to many countries. But although abundant good food is available, many teenagers need improved diets. This is confirmed by much research on nutritional status of teenagers. Consistently it shows

1. The older the child, the poorer the diet. From childhood to teenage, the percentage of young people with poor diets increases sharply.

2. The nutrients most commonly lacking in diets are calcium and vitamin C.

3. Vitamins A, thiamine, and riboflavin are more often lower in diets in some sections of the country than in others.

4. Iron is often low in the diet of the teenage girl.

5. The teenage girl is the poorest fed member of the family.

Nutritional status studies throughout the United States show uniform results. Percentages may vary in different regions, but the trends are consistent. See figures l and

One reason the teenage girl is not as well fed as the teenage boy is because she needs about one-third less calories. Teenage girls need 2,400-2,600 calories--teenage boys, 3,100-3,600, according to the National Research Council recommended daily dietary allowances. On a 2,000 calorie diet every food must contain important nutrients or there are not enough minerals, vitamins, and protein.

The fewer calories you eat, the more important it is to make all of them count. Foods with "empty calories" often replace foods with important nutrients. For teenagers especially, foods high in sugar and fat often replace those with more-needed protein, minerals, and vitamins.



Figure 1. This visual demonstrates how poor teenage diets are. First show 10 cutouts of girls and 10 of boys. Then remove cutouts of 4 girls and 6 boys. They have an adequate diet; we're not concerned with them. The remaining 6 girls and 4 boys have inadequate diets.

The cutouts of 6 girls and 4 boys mean this: from every 10 girls, 6 of them have poor diets; that is, they get two-thirds or less of nutrients recommended for their age group by the National Research Council.

These findings come from the Cooperative Nutritional Status Studies in the Western Region, Seven-day diet records were collected from about 800 boys and girls, age 13-15 years.

One point deserves emphasis here. It's the difference between research and studies. The main objective of each is different. Research is carefully planned, it's exacting, and factors which might affect results are carefully controlled. Its purpose is to learn reliable information.

Studies, on the other hand, are done mainly to involve people and gain their interest. They are not as exacting nor are variables controlled nearly as much as in research.

Although findings from research and studies may be roughly similar, research data is

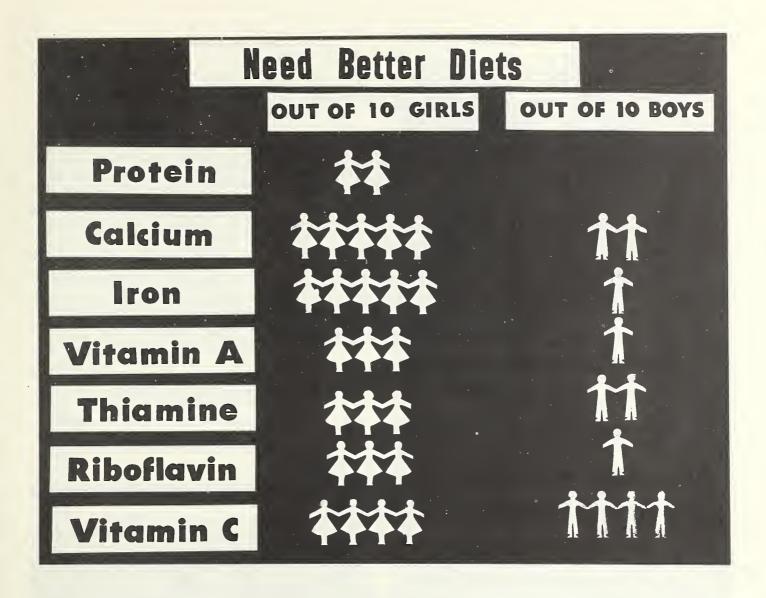


Figure 2. How many girls and boys receive less than two-thirds of the daily amounts of various nutrients recommended by the National Research Council? Here's the answer. Take calcium, for example. Five out of every 10 girls, and two out of every 10 boys, get less than two-thirds of the amount of calcium recommended daily. Follow this same method with the other nutrients.

The chart emphasizes several points: (1) Girls are poorer fed than boys. (2) Vitamin C is the only nutrient in which the same number of girls and boys are low. (3) Girls are often short of calcium, iron, and vitamin C. (4) Boys are often short of calcium, thiamine, and vitamin C.

more dependable because it can be repeated with consistently the same results.

You may have assisted with studies in schools, home demonstration clubs, or 4-H clubs. They're worthwhile because they give leads on the foods people are eating as well as interest the people involved.

The do-it-yourself study is excellent for supplementing exacting, controlled research. Informal studies bring the story home and make people feel that research done by their university and USDA really applies to them.

### What She Wants

The teenage girl is our biggest concern. We need to take a special look at her and her problems. Let us look briefly at her develop-

mental needs. See figure 3. You'l' find more details on this in the next section, "What Is the Teenager Like?," prepared by Viola Hunt.

- l. Appearance. She is learning to live with a growing body. She is very aware of her size and shape. She is interested in eating, but she is also worried about getting fat.
- 2. <u>Friends</u>. She is interested in doing what the others do, in being like others, in finding boy friends, and in having others like her.
- 3. Independence. The teenage girl is trying to become emotionally independent from parents and other adults. One minute she reacts like a child and the next minute like

# What She Wants



Figure 3. These basic wants of teenage girls affect their food habits.

an adult. It is hard to know when she will be dependent and when independent. She may assert her independence by erratic eating.

4. Personality. She is greatly concerned with her appearance and spends much time in front of the mirror. She is especially concerned with what others think of her. She may not understand the tie-in between food and energy or pep.

Why She Is Not Well Fed

Now let's look at some reasons why she is not well fed. See figure 4.

1. Skips breakfast. Many "reasons" are given for this--lack of time in the morning, not hungry, afraid of getting fat, rather sleep a few minutes longer, mother doesn't prepare breakfast, prefers to spend time on appearance.

- 2. Eats poor snacks. Eating is part of the social pattern. Studies from Iowa show about one-fourth of the calories may come from snacks. Since a teenage girl requires 2,400 calories, the 600 calories she eats as snacks are important to the day's nutrients. Sweets, potato chips, and carbonated beverages are 'empty calories.' They provide little or no nutrients. Choice of good snacks is an important part of the nutrition program.
- 3. Drinks no milk. She doesn't drink milk or not enough of it, she regards it as childish, she thinks milk makes her fat.
- 4. Fears she'll get fat. This fear--notice we say fear--is one of the greatest factors in poor nutrition, in both the teenage girl and her mother. The girl enjoys social eating, but she needs about one-third less calories than the teenage boy--so she cannot eat as often, or as much, as he does. Even though she is not now overweight the present styles make her very weight-conscious. She needs to understand nutrition so she can get a good diet and at the same time keep her calories down.

# Why She Is Not Well Fed



Figure 4. These habits of teenagers help explain their poor diets. Changing these habits means a long step toward better diets.



Figure 5. Balance your calories and activities to maintain your normal weight.

Calories are only one part of the weight control picture; activity is the other. See figure 5. When your calories and activities balance, your weight remains steady. If your activities are greater than the calories, you lose weight; and if you take in more calories than you need for your activities, you gain weight.

An Iowa study indicates that the overweight girls actually ate less calories than girls of normal weight. In fact the "over-weighters" diet was poorer in many respects. For example they drank less milk.

Overweight girls tend to sit more, they do not enjoy active sports, dancing and physical activities—so their actual calorie needs are less. If their physical activities call for less calories, they will actually gain weight on what might be a normal diet for an active girl.

If calories and activities balance, you'll neither gain nor lose weight. This is important for a recreation program with teenagers.

### WHAT IS THE TEENAGER LIKE

Viola Hunt
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The teen years are challenging years both for the young people and for their parents and leaders. Each year sees change and development; the years between 14 and 18 are especially important.

Nutrition specialists and 4-H leaders need to know what teenagers are like; then adults should know better how to attack the problems that affect teenage diets.

### Physical Tasks

Getting used to a changing body and using it effectively.

- --Girls are usually 2 years ahead of boys the same age.
- --In any age group, there may be a 5 year range in development. For example, some 10-year-olds may be like 8-year olds--some like 13-year-olds.
- --Growth may be very rapid at the beginning of puberty.
- -- Sex changes need to be understood.

### This may result in:

- -- Preoccupation with looks, hair style, figure, muscular development, and other things.
- -- Larger appetite.
- -- Fear of getting too fat.
- --Dislike of comments on growth.
- -- Awkwardness.

Throughout this period, a good attitude toward the physical changes and a knowledge of the facts need to be developed.

### Social Tasks

- --Friends of both sexes are very important.
- --Being alike seems to give comfort-dressing alike, using their own lingo.
- -- When they are not together, they keep in touch by telephone.

The social and physical tasks are of much concern, says the Purdue Opinion Poll.

- --52 percent would like to gain or lose weight.
- --54 percent want people to like them better.
- -- 60 percent want more friends.
- -- 42 percent want to be more popular.

We can help young people by giving them opportunities to be together and to learn how to get along with each other. We can give them comfort by allowing them to be like others in acceptable situations and by pointing out the unacceptable situations.

### Gaining Independence from Adults

The teenager goes back and forth between dependence and independence. It is difficult for some parents to grant independence; they seem to want dependent children. Independence should be granted little by little from very early childhood.

Independence for the teenager means being able to:

- --Carry on an activity with little or no help.
- -- Look after one's self.
- -- Make decisions and then take the consequences.
- --Be responsible for one's self, one's possessions, one's money.

4-H gives opportunity to developindependence by providing:

- -- Project learning experiences.
- --Social experiences in making friends and perhaps in dating.
- --Experiences in earning money, or at least in using money.
- --New experiences away from the home circle such as camps and fairs.

The teenager likes to show that he is grownup. It takes practice to move from dependence to independence.

Establishing a Philosophy and Values to Live By

The teenager is an idealist with big visions.

He wants to know what values are important.

He is interested in religious experiences and meaning.

He needs worthy examples for a pattern.

The nutrition projects offer many activities to:

--Help with the physical tasks of growing up.

Study of nutrition for good health and good looks, study of foods for diet problems of gaining or losing weight.

--Help with the social learnings of young people.

Food is usually served at club meetings and social gatherings; sometimes the social activity centers around the outdoor cookout, weiner roast, or such events.

--Show their growing independence.

Projects offer opportunities to plan, prepare, and serve meals to others.

# GUIDELINES FOR IMPROVING TEENAGE NUTRITION (with typical examples)

### Building the Program for Teenagers

1. Base foods and nutrition program for teenagers on needs and interests of that age group.

Use visuals that show teenagers; avoid complex charts.

Encourage weight control groups for teenagers.

2. Involve both boys and girls in planning and carrying out their nutrition program.

Advise with 4-H committees on ways to carry on nutrition program.

Participate in local surveys.

Encourage joint activities for boys and girls such as outdoor cookery.

3. Prepare appealing literature that contains up-to-date nutrition information for the teenager.

Emphasize the part that food plays in vigor, good looks, good figure, and pleasing personality.

Emphasize the meals rather than individual foods.

dividual loods.

4. Use informal situations for teaching nutrition.

Serve nutritious snacks for refreshments.

Encourage milk and fruit juice dispensers.

Emphasize good meals in camps.

5. Provide more nutrition information in all food activities.

### Training Personnel

1. Help the entire extension staff understand importance of the teenage nutrition program. Home demonstration or 4-H agent explain program to county staffs.

State 4-H advisory committee in foods and nutrition help plan and publicize nutrition activities.

Integrate teenage foods and nutrition activities with marketing, health, clothing, dairy, horticulture.

2. Train leaders and extension agents about teenagers and their nutrition.

Understand teenagers, both girls and boys.

How food affects growth, appearance, vigor, and personality.

Nutritional status of youth.

Methods to use.

### Involving Others

1. Involve professional people.

Enlist the cooperation of school, medical, dental, and public health groups in planning and conducting a teenage nutrition program.

Capitalize on present interest in science. Have doctors and outstanding scientists explain the long-time effect of good nutrition.

2. Involve parents, homemakers' clubs, industrial groups.

Ask food markets to provide space for teenagers to feature nutrition information.

Have homemakers' clubs help secure leadership for groups.

Invite sponsors to meal preparation activities or achievement programs.

Have members demonstrate before homemakers and civic groups.

### WAYS TO EMPHASIZE TEENAGE NUTRITION THROUGH EXTENSION WORK

### Training Leaders

- 1. Urge them to make more nutrition information available in all foods activities.
- 2. Help them with methods for presenting nutrition information at club meetings.
- 3. Suggest ways that 4-H'ers can influence their families and communities.
- 4. Recommend more newsletters for contacting members and others.

### 4-H Camps

1. Serve nutritionally adequate food at camps.

Nutritionist helps counties with menus. Help counties plan attractive food service at camp, and thus create a pleasant atmosphere.

Encourage all members to try the nutritious foods served.

Provide for nutritious snacks--apples, milk. Control the sale of candy and carbonated beverages, particularly at night.

- 2. Train camp councelors and junior leaders in the above teaching procedures.
- 3. Provide cook-outs as an opportunity for teaching nutrition.

### Health and Other Speciality Camps

- 1. Plan discussions on nutrition with trained personnel as a resource.
- 2. Urge nutrition study at conservation camps of personal resources to reach both boys and girls.
- 3. Schedule opportunity for physical checkups to indicate the members' nutrition, dental and posture conditions. Desirable to have a take-home check sheet.

# State 4-H Events--Congress, Round-Up, 4-H Week on Campus

- 1. Emphasize teenage participation. If possible have teenagers involved in the planning as well as the carrying out.
- 2. For nutrition sessions, emphasize the food needs of the particular area. For example, foods high in vitamin C.
- Stress ways that followup can help apply the information given at the State event.

4. When competitive activities are held, include suggestions for improvements and ideas for further use of the information.

### Nutrition as Part of Health and Personality

- 1. Relate nutrition to all phases of health.
- 2. If your State uses a rotation plan for 4-H health emphasis, suggest that nutrition be included frequently. Furnish attractive and useable materials.
- 3. Capitalize on the teenager's interest in personality improvements. Show that nutrition is basic to pep, energy, good looks, and good physique.

### Workshop Training (2 Ways of Approaching It)

1. How-to-do methods for teaching nutrition.

How to work with teenagers.

Nutrition needs of teenagers.

Methods to use, demonstrate, and evaluate--visual aids, discussion tools, skits, demonstrations.

### 2. Meal preparation approach.

Demonstrations and group participation in planning, preparing, and serving a simple meal which fits into a good daily food consumption pattern. Emphasize selecting foods that are nutritious, tasty, economical.

Encourage leaders to conduct the same type of work meeting in their local club, being sure everyone participates.

Whichever method you use, ask participants to evaluate the workshop--

The learning.
The interest.
The help given others.

# Community Development Clubs with All Family Members Taking Part

- 1. Provide opportunity for young people to know the nutrition situation and how their families plan to meet their food needs.
- 2. Give teenagers a chance to help plan for community betterment and to give demonstrations, make surveys, build exhibits.
- 3. Have young people help provide and serve tasty and nutritious foods.

### Judging

1. Discuss and set up objectives and purposes for judging activities.

- 2. Train 4-H leaders to set up identifiable classes in nutrition--such as a daily menu for a teenager's family for a specific time of year and budget.
- 3. Encourage leaders to use judging as a teaching tool in local programs.

Favorite Foods Shows and Meal Preparation Activity

- 1. Include more nutrition teaching, rather than just a show of food preparation skills.
- 2. Display and explain the food in relation to the day's menu, as well as food values of the dish prepared.

County and Community Events--Achievement Day, Rally

- 1. Present outstanding foods and nutrition demonstrations by members.
- 2. Use posters, displays, and exhibits to emphasize work done in foods and nutrition.
- 3. Encourage skits on nutrition, planned and produced by teenagers.

- 4. When awarding recognitions tell the success story back of the achievement. Achievement programs can stimulate many mass media contacts.
- 5. Share with parents and community the local accomplishments of their youth and get suggestions.

Educational Exhibits and Demonstrations

- 1. Teenagers present up-to-date nutrition information.
- 2. Teenagers demonstrate practical subjects needed locally.
- 3. Leaders and agents suggest appropriate educational exhibits.

Special Interest Groups

- 1. Groups of boys and girls to plan ways to improve food habits and achieve normal weight.
  - 2. Personality improvement study groups.
  - 3. Special training diets for athletes.

### TOOLS FOR IMPROVING DIETS OF TEENAGERS OUTSIDE 4-H

You recall the two objectives of this booklet--to help improve nutrition of 4-H teenagers--and to reach beyond 4-H to all teenagers. The previous section suggested ways of working through the 4-H program. This section offers ideas for improving nutrition of teenagers outside 4-H.

Mass media are dependable channels for extending nutrition information to all teenagers. Newspaper, radio, TV, films, visual aids and similar methods reach wide audiences at one time. Use them fully!

Your 4-H nutrition work offers all kinds of story tips and program ideas for use with mass media. Use this same information, but without reference to 4-H. Adapt it as needed for a non-4-H audience.

### **News Articles**

Special nutrition stories (personal accomplishment, project activity and community activities), some authored by teenagers.

Agents weekly column --

Pertinent nutrition information.
Summary of surveys about teenagers diets.
Stories about local nutrition activities.

Series of articles for teenagers about nutrition.

Editorials. Talk with editors about teenage nutrition and what might be done.

### Magazines

Supply and encourage use of nutrition articles.

Articles written for teen readers as well as farm family living, and womens' magazines.

Topic for leaders monthly meeting in National 4-H News (scheduled for April). "What are you doing in your community to improve teenage nutrition?"

### Radio and TV

Local shows and spot announcements. Nutrition skits.

Panel interviews involving youth with experts (specialists, home agents, doctors, dentists, local leaders, dietitians).

TV series on basic nutrition --

1. You are what you eat.

"It's a very odd thing, as odd as can be, what Miss T. eats, turns into Miss T."

Eat a wide variety of foods to provide all nutrients needed, since nutrients work as teams.

2. Gifts of good nutrition.

Strong, vigorous bodies.

Alert minds.

Enjoyment of work and recreation.

Beauty and personality.

- 3. Balance of calories and activity determines weight gains.
  - 4. How much food?

Use guides for calorie watching--don't be slaves to calorie tables. Good nutrition should be the objective, not calories.

5. Nutrients.

Their role in body.

In terms of teenagers needs.

Their equivalents in terms of foods.

6. Teenagers' food habits --

Visualize ways research from local area can be presented.

7. Three squares and snacks--

Use a daily food guide.

8. Watch those fad diets.

### Films

- "It's All in Knowing How," National Dairy Council, 111 North Canal Street, Chicago 6, Ill.
- "Something You Didn't Eat," USDA, Washington 25, D. C.
- "Food as Children See It," General Mills, Chamber of Commerce Building, Minneapolis, Minn.
- "Why Eat a Good Breakfast," Cereal Institute, 135 South La Salle Street, Chicago 3, Ill.
- "Losing to Win," Metropolitan Life Insurance, I Madison Avenue, New York 10, N.Y.
- "Weight Reduction Through Diet," National Dairy Council, 111 North Canal Street, Chicago 6, Illinois

### Exhibits and Displays

Place them in-County extension offices.
Local, county, and State fairs.
Store windows.
Schools - bulletin boards, lunchrooms.
Community and 4-H meeting rooms.

Ideas for themes --

In exhibits for a business establishment, tie a nutrition idea to the business.

Example -- Bank: Invest in good nutrition.

-- Lumber yard: Building materials for good health.

Take advantage of national dates and events such as 4-H Club Week, Health Week, Better Breakfast Week, Dairy Month.

Sources for ideas --

National Committee on Boys and Girls Club Work, 59 East Van Buren Street, Chicago 5, Ill. (Suggestions that will help with 4-H exhibits)

National Dairy Council, 111 North Canal Street, Chicago 6, Ill.

National Live Stock and Meat Board, 407 South Dearborn Street, Chicago 5, Ill.

American Institute of Baking, 1135 West Fullerton Avenue, Chicago 14, Ill.

Metropolitan Life Insurance Company, l Madison Avenue, New York 10, N. Y.

American Home Economics Association, 1600, 20th Street, N. W., Washington 9, D. C.

### **Posters**

Involve young people in developing posters in --

4-H Clubs.

Art classes.

Health classes.

Encourage use of existing posters.

Investigate places where posters can be maintained over a period--such as school lunchrooms.

### Cartoons

Use cartoons in poster series.
Suggest cartoons on nutrition subjects such as weight control, food fads.

Skits and Plays

Encourage young people to develop their own.

Use available scripts.
Try puppets for variety.

### Local Surveys

Groups that might be reached.
 Classrooms.
 4-H Clubs.
 Community.
 School lunch.

### 2. Types--

a. Breakfast.

A simple one can be done by asking each teenager to write down everything he ate for breakfast and estimate amounts. A simple method of scoring might be:

Food	Points
Citrus fruit or juice	2
Any other fruit	1
Milk, l glass	2
Cocoa, 1 cup	1
Egg, or a serving of any	
other protein-rich food	2
Cereal with milk and sugar.	2
Bread or any other baked	
product or potatoes	2
Two eggs, or eggs and bacon,	
still counts as only 2 points.	
A good breakfast would	
probably score 5 or more.	
Spacks for a wook	

b. Snacks for a week.

c. Food intake for a week (See December 1958 Nutrition News, National Dairy Council).

d. Intake of a specific food group commonly lacking in teenagers diets, such as milk or foods rich in vitamin C.

### Science Fair

Encourage use of nutrition experiments, demonstrations, and exhibits.

Animal feeding experiments.

Simple nutrition surveys as outlined above.

Study of specific nutrient such as vitamin C.

### References for Teaching Nutrition

- "Teaching Nutrition." Mattie Pattison, Helen Barbour, and Ercel Eppright, The Iowa State College Press, Ames, Iowa.
- 2. "Food for Life." R. W. Gerard, University of Chicago Press (Excellent for illustration ideas).
- 3. Kits assembled by the National 4-H Foods and Nutrition Program Development Committee.

Selected nutrition literature made available to Extension nutritionists and 4-H Club leaders.

### EXAMPLES OF TEENAGE NUTRITION WORK NOW IN USE

Most States carry on teenage nutrition work to some degree in their 4-H foods and nutrition projects, according to a survey of present teenage nutrition work. Here are various approaches and States using them:

### Leader Training Tools

Bulletins for leaders:

"Teaching Nutrition in the 4-H Foods Projects" and "Do It Yourself 4-H Nutrition Aids", California.

Leaders guide on "Developing Attitudes about Good Nutrition" -- Pennsylvania.

"Help Your Teenager to Eat Better"--for leaders, teachers, parents--Virginia.

Visuals based, on regional nutrition study -- Idaho.

Circular based on regional nutrition study - - Montana.

Series of training meetings, February and November--Washington.

### Nutrition Emphasis Through Health Programs

Discussion leaflets, one for younger 4-H'ers and one for older--Pennsylvania.

"Breakfast Right--Feel Bright" with variety of Activities suggested--West Virginia.

"Chart Your Health Habits" -- Wyoming.

Nutrition section at State Health Camp--Iowa, Minnesota.

Nutrition section at Conservation Camp, also better camp menus--South Carolina.

### Emphasized Through 4-H "Activities"

Nutrition presentations at Roundup, such as "Good Nutrition Is Fashionable" and "Good Nutrition Beauty Bar"--Texas.

Breakfast study used for nutrition emphasis at Junior Leader Camp--Wyoming.

Radio spots specifically aimed atteenagers -- Rhode Island.

Special speaker at Farm and Home Week--Delaware.

Exhibit at Farm and Home Week--New York. Skits on Good Nutrition--North Dakota.

Essay Contest--Mississippi. "Fun with Foods" at 4-H Center

"Fun with Foods" at 4-H Center, feature of news articles -- Georgia.

Classes at State 4-H Congress--Idaho.

Weight Control--Indiana.

Teenage nutrition section at Jr. Leader Conference planned by committee of 20 members--Connecticut.

Judging contest emphasizing menus for good nutrition -- Maine.

Favorite Foods Shows -- Connecticut.

### Other Methods

Bulletin for parents, "In Tune with Teens"-- Michigan.

Girls helped develop 4-H bulletin--New Hampshire.

Cooperation with School Lunch Program--West Virginia.

Pilot project for older youth -- Illinois.

Special Workshop in cooperation with State Dept. of Health--Virginia.

Involvement of Extension Personnel in Addition to 4-H and Nutritionist

Cooperation with dairy staff -- Alabama.

Agent and leader training with family life specialist--Connecticut.

Consumer marketing specialist cooperated on workshop for agents emphasizing food needs of teens and including help in how to train leaders--Massachusetts.

### HOW ARE YOU DOING?

(To help nutrition specialists and State 4-H leaders evaluate their own program) Somewhat Little None Yes 1. Does your nutrition education interest the teenagers? 2. Does it consider their basic needs? 3. Do teenagers think that nutrition is important to them, 4. Are they aware of the long-time effect of good nutrition? 5. Does your program consider all teenagers -- not just those enrolled in the 4-H program? 6. Is your nutrition program available to boys as well as girls? 7. Do boys participate in it? 8. Do you use informal situations for teaching nutrition? 9. Do you involve young people in the planning of your nutrition program? 10. Do all your foods projects include some nutrition? 11. Do you apply your nutrition teaching to other projects? (Clothing and grooming) 12. Do you interpret research so that it is interesting and understandable to teenagers? 13. Do you involve other professional people in your program? (Business people, doctors, dentists, teachers, school lunch.) 14. Do you capitalize on the current interest in science? 15. Do your agents and leaders know basic nutrition? 16. Have your agents and leaders had training in understanding the teenager? 17. Are you training agents and leaders to understand teenagers response to food? 18. Are you developing nutrition activities as well as projects? 19. Do you have a State Foods and Nutrition Advisory Committee composed of a State 4-H leader, agents, and specialists? 20. Do you have the understanding and support of administra-

tion for your program?

### SELECTED BIBLIOGRAPHY on NUTRITIONAL STATUS STUDIES

Ask your experiment station about other work carried out in your State or region so you can use data applying to your State.

### Regional Bulletins

Variations in dental caries experience among children of five Western States.

Tank, G., Esselbaugh, N., Warnick, K., and Storvick, C. A., 195-.

Nutrition of children in three selected schools in Iowa, Kansas, and Ohio. A pilot study. Marlatt, A. L., Eppright, E. S., Patton, M. B., and Hathaway, M. L. Kansas Agr. Exp. Sta. Tech. Bul. 81 and North Central Regional Pub. 70, 1956.

Cooperative nutritional status studies in the Western region. I. Nutrient intake, Wilcox, E. B., Gillum, H. L., and Hard, M. M. Utah Agr. Exp. Sta. Bul. 383. Western Regional Research Pub. 1956.

Nutrition of 9, 10, and 11-year-old children in Iowa, Kansas and, Ohio, I. Dietary Findings, Eppright, E., Jebe, E., Sidwell, V. S., Marlatt, A. and others, Patton, M. B. and others. Iowa Agr. Exp. Sta. Bul. 434 and NC Reg. Bul. 59. Ames, 1955.

Working together for a better understanding of the nutrition of school children. Patton, M. B., Eppright, E. S., Marlatt, A. L., and Hathaway, M. L. J. Home Economics 45: 161-164. 1953.

Role of breakfast and of between-meal foods in adolescents' nutrient intake. Steele, B. F., Clayton, M. M., and Tucker, R. E. J. Am. Dietet. Assoc. 28:1054, 1952.

### Connecticut

Food habits of children. Potgieter, M., and Morse, E. H. J. Am. Dietet. Assoc. 31:794-796. 1955.

### Idaho

Nutritional status of adolescent Idaho children, II. Food Habits. Warnick, K. P., Bring, S. V., and Woods, E. J. Am. Dietet. Assoc., 31: 1143-1146. 1955

### Iowa

Very heavy and obese children in Iowa. Eppright, E. S., Coons, I., and Jebe, E. J. J. Home Economics 48, 168-172. 1956.

Diet and nutritional status of Iowa school children. Eppright, E. S. Amer. J. Pub. Health 45, 464-471. 1955.

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